



Cal/EPA

**San Diego
Regional Water
Quality Control
Board**

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Pete Wilson
Governor

June 20, 1997

To: Interested Parties

SUBJECT: USE OF NONPURGE METHOD FOR SAMPLING OF GROUND WATER MONITORING WELLS AT GASOLINE IMPACTED SITES.

It has been suggested that there may not be a need to purge ground water wells prior to sampling. Under certain circumstances, reliable and representative ground water data from gasoline contaminated underground storage tank (UST) sites can be obtained without purging. Well purging can increase costs due to labor, time, equipment needs, and purge water disposal. Significant cost savings could be realized if representative ground water samples could be collected without prior purging of the well(s).

In October 1996, a report entitled "The California Groundwater Purging Study for Petroleum Hydrocarbons," was prepared for the Western States Petroleum Association (WSPA) by SECOR International Incorporated. This report presented the results of an evaluation of the necessity for purging wells prior to ground water sampling. The report provided an extensive literature review of well purging principles and a historical perspective of well purging. Ground water samples were collected from contaminated sites from various regions in California. Based on the comparison of 4,808 selected nonpurge/post-purge data pairs from 556 wells, the authors concluded that there was no statistically significant difference between the nonpurge and post-purge concentration results for gasoline constituents. Copies of this report can be obtained through WSPA in Sacramento at (916) 498-7753.

The State Water Resources Control Board UST Program Manager, Mr. Allan Patton, issued a guidance letter to the Local Oversight Program (LOP) agencies and Local Implementing Agencies (LIAs) on March 26, 1997, regarding "California Groundwater Purging Study for Petroleum Hydrocarbons." The letter acknowledged the results of the WSPA report, stated that there were limitations to the nonpurge sampling method, and concluded that a nonpurge sampling method, where applicable and appropriate, should be implemented in order to reduce costs whenever possible.



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Our mission is to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

San Diego Regional Water Quality Control Board (RWQCB) staff has reviewed the WSPA report and concludes that a nonpurge sampling method is applicable if the following minimum conditions described below are met:

1. The only contaminants of concern are gasoline petroleum hydrocarbons (e.g. TPHg, benzene, toluene, ethylbenzene, total xylenes, and MTBE); and
2. No free phase petroleum hydrocarbon exists in the well; and
3. All pertinent well construction details are known to the lead regulatory agency; and
4. The well has been appropriately developed; and
5. The ground water monitoring well is screened across the water table in an unconfined aquifer (no submerged well screen).

Prior to implementation of the nonpurge sampling method, the responsible party must notify the lead regulatory agency, in writing, of the intent to implement this sampling protocol and receive concurrence from the lead regulatory agency. This notification must include a signature of a California registered professional (RG, PE, CEG, RH) certifying that the above conditions have been met.

A site-specific nonpurge/post-purge ground water monitoring study may be used to evaluate wells not meeting the above minimum criteria. On a case by case basis, should the results of a site-specific nonpurge/post-purge study show that no statistically significant variance in the petroleum hydrocarbon concentrations exist, and the report has been submitted and approved by the lead regulatory agency, then a nonpurge sampling method may be applicable and appropriate for the site.

When a responsible party requests site closure, the lead regulatory agency may require that a final round of purged ground water samples be collected from the monitoring well(s).

If you have any questions, please contact the Regional Board staff assigned to your UST case (619) 467-2952 or the staff of the appropriate local oversight agency.

JOHN H. ROBERTUS
Executive Officer

cc: Regional Board Members
Allan Patton, SWRCB UST Program Manager
Regional Board UST Program Managers
San Diego County LOP



Orange County LOP
Riverside County LOP

